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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,955	02/12/2004	Grady M. Wood	125.025US02	7084
34206	7590	11/30/2004	EXAMINER	
FOGG AND ASSOCIATES, LLC P.O. BOX 581339 MINNEAPOLIS, MN 55458-1339			TRAN, CHUC	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/777,955

Applicant(s)

WOOD, GRADY M.

Examiner

Chuc D Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-17 is/are allowed.
- 6) ☒ Claim(s) 1,2,18-20,22-25,27-31 and 36-40 is/are rejected.
- 7) ☐ Claim(s) 3-5,21,26 and 33-35 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/12/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. Claims 4 and 5 are objected to because of the following informalities:

In claim 4, line 2, delete “different” (electrode);

In claim 4, line 2, “a” (load) change to - - the - -;

In claim 4, line 4, delete “different” (electrode);

In claim 5, line 3, delete “different” (electrode);

In claim 5, line 6, delete “different” (electrode).

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 18-20, 22-25, 27-31 and 36-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Andersson (USP. 6,157,138).

Regarding claim 1, Andersson disclose method of operating an EL-lamp circuit comprising:

- storing positive charge on a first electrode of a EL-lamp with a power supply (Andersson, Col. 4, Line 29) (Col. 5, Line 35); and
- discharging the positive charge stored on the first electrode to a positive terminal of the power supply (30) (Andersson, Col. 5, Line 60).

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Regarding claim 2, Andersson disclose that cycling on and off a discharge current path that couples the first electrode to ground (Andersson, Col. 1, Line 45) (Col. 5, Line 62); and

- when the discharge current path is cycled on, conducting current from the first electrode to the positive terminal of the power supply (Andersson, Col. 2, Line 64).

Regarding claim 18, Andersson disclose a method of operating an EL-lamp circuit, the method comprising:

- storing energy from a power supply on an EL-lamp during a charging cycle (Andersson, Col. 2, Line 1); and
- returning energy stored on the EL-lamp to the power supply during a discharge cycle (Andersson, Col. 5, Line 62).

Regarding claim 19, Andersson disclose that cycling a first transistor in response to a first digital signal (Andersson, Col. 3, Line 8).

Regarding claim 20, Andersson disclose that inductively pumping energy to the EL-lamp in response to the cycling of the first transistor (Andersson, Col. 3, Line 59).

Regarding claim 22, Andersson disclose that selectively creating a charging path to the EL-lamp (Col. 3, Line 9).

Regarding claim 23, Andersson disclose that selectively creating a charging path further comprises: selectively activating one or more switches (Col. 3, Line 43).

Regarding claim 24, Andersson disclose that selectively providing a discharge path to the power supply during the discharge cycle (Col. 4, Line 19).

Regarding claim 25, Andersson disclose that selectively switching one or more switches (Col. 4, Line 17).

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Regarding claim 27, Andersson disclose that cycling a second discharge transistor in response to a second digital signal (Col. 4, Line 15).

Regarding claim 28, Adersson disclose that inductively pumping energy stored on the EL lamp back to the power supply in response to the cycling of the second transistor (Col. 4, Line 9).

Regarding claim 29, Andersson disclose that selectively creating a discharge path to the power supply (Col. 4, Line 19)

Regarding claim 30, Andersson disclose that activating one or more switches (Col. 4, Line 18).

Regarding claim 31, Andersson disclose that providing a charging path to the EL lamp during the charging cycle (Col. 4, Line 12) (Col. 3, Line 2); and

- providing a discharging path to the power supply during the discharging cycle (Col. 4, Line 19) (Col. 3, Line 2).

Regarding claim 32, Andersson disclose that cycling a first transistor in response to a first digital signal during the charging cycle (Col. 3, Line 8); and

- cycling a second transistor in response to a second digital signal during the discharging cycle (Col. 4, Line 16).

Regarding claim 36, Andersson disclose a method of operating an EL-lamp circuit, the method comprising:

- a selectively providing a charging path from a power supply to the EL-lamp during a charging cycle (Col. 3, Line 5);
- cycling a first transistor in response to a first digital signal during the charging cycle

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(Col. 3, Line 10);

- storing energy from a power supply on an FI.-lamp during the charging cycle (Col. 2, Line 63) (Col. 3, Line 64);

- selectively providing a discharging path form the EI -lamp, to the power supply during a discharging cycle (Col. 2, Line 65) (Col. 4, Line 7);

- cycling a second transistor in response to a second digital signal during the discharging cycle (Col. 4, Line 15); and

- returning energy stored on the EL-hump to the power supply during the discharge cycle (Col. 4, Line 15).

Regarding claim 37, Andersson disclose that inductively pumping energy to the EI-lamp in response to the cycling of the first transistor (Col. 3, Line 25 and 59).

Regarding claim 38, Andersson disclose that inductively pumping energy stored on the EI lamp back to the power supply in response to the cycling of the second transistor (Col. 4, Line 16) (Col. 3, Line 25).

Regarding claim 39, Andersson disclose that selectively activating one or more switches (Col. 3, Line 6).

Regarding claim 40, Andersson disclose that selectively activating one or more switches (Col. 3, line 6).

***Allowable Subject Matter***

4. Claims 6-17 are allowed.

5. The following is an examiner's statement of reasons for allowance:

Regarding claim 6, the references of the Prior Art of record fails to teach or suggest the

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combination of the limitations as set forth in the claim: placing a select amount of positive charge on a second electrode of the load with the power supply and specifically comprising the limitation of discharging the positive charge on the second electrode to the positive terminal of the power supply.

Regarding claims 7-10 are allowable for the reason given in the claim 6, because of their dependency status from the claim 6.

Regarding claim 11, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in the claim: placing a select amount of negative charge on the first electrode of the load with the power supply and specifically comprising the limitation of discharging the negative charge on the first electrode.

Regarding claim 12-17 are allowable for the reason given in the claim 11, because of their dependency status from the claim 11.

6. Claims 3-5, 21, 26, and 33-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Citation of relevant prior art***

Prior art Koskovich et al (USP. 5,861,719) disclose regulated power supply for electroluminescent lamps.

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Prior art Tegatz et al (USP. 5,821,701) disclose boot regulator circuit.

Prior art Kamens et al (USP. 5,418,434) disclose voltage boosting circuit for an electroluminescent lamp driver.

Prior art Buell et al (USP. 6,320,323) disclose EL driver with lamp discharge monitor.

Prior art Coghlan et al (USP. 6,111,362) disclose controlling color shift in EL phosphors.

Prior art Kimball (USP. 5,349,269) disclose power supply having dual inverters for electroluminescent lamps.

Prior art Andersson (USP. 6,038,153) disclose inverter circuit for illuminating an electroluminescent lamp.

### ***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuc D Tran whose telephone number is (571) 272-1829. The examiner can normally be reached on M-F Flex hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



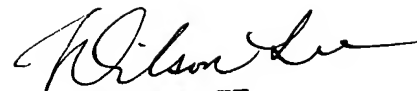
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November 19, 2004



**WILSON LEE**  
**CHIEF EXAMINER**